

SOME NEW, &c., *LEPIDOPTERA* FROM CHILE.

BY WM. BARTLETT-CALVERT, F.E.S.

On looking over my collection the other day, I noticed that I had put aside in one of my boxes several moths which had caught my attention when collecting in the Indian territory of Araucania some eighteen months ago, and on comparing them with Butler's, Felder's, and others' descriptions, found that they were either examples of lost types or new species, so I now give a list of both the lost (?) and describe the new species; and I think I might say that when I am able to compare my collection with that of the British Museum, I shall still be able to present some five or six new species of Geometers, and, perhaps, a few Micros, and a species of *Hepialidæ* with pectinated antennæ from Alfalfar, Cordillera of Santiago.

Iochroa chlorogastra, Feld. u. Rogenh., *Reise der Fregata Novara um der Erde*, Lep. iii, plate 99, fig. 17, 1875; Araucania, in June. One specimen only, now in Dr. Izquierdo's collection.

Mallocephala rubripes, Blanchard, Gay's *Hist. Fisica i Politica de Chile*, page 68, atlas ii, plate 4, fig. 7; Araucania, in February. Of a smoky-black colour, wings semi-transparent; thorax black; sides of thorax slaty, with an orange-yellow band above and at bottom, near base of wing; abdomen a vermilion-red. This species I always found by day on the walls of the house beneath the corridor; I only got males, so I expect that the ♀ will either be apterous, or have aborted wings.

Rhinodia bi-ocellata, Feld. u. Rogenh., *l. c.*, plate 129, fig. 14; Araucania. One specimen, caught flying by day in the woods.

Phasiane catillata, Feld. u. Rogenh., *l. c.*, plate 129, fig. 3; Araucania; in the lamp at night.

Cœnurgia runica (*Euclidia*), Feld. u. Rogenh., *l. c.*, plate 117, fig. 11; Araucania; caught flying by day amongst grass, and taken by night in the lamp, both ♂ and ♀. The male has pectinated antennæ, and is of a dull leaden hue, whereas the female is brighter coloured, and has not pectinated antennæ, but very finely serrated ones.

Bacillogaster hypparia, Feld. u. Rogenh., *l. c.*, plate 132, fig. 35; Alfalfar. One specimen; lamp at night.

TETRACIS IANTHINUS, *sp. nov.*

♂ ♀. *Alis anticis supra violaceis nigro-punctatis; margine fulvis, lineis transversalibus, macula discoidali spadiceis; posticis supra violaceis nigro-*

punctatis, lineis transversalibus spadiceis; subtus, anticis violaceis silaceis; posticis violaceis pallidioribus; macula discoidali nigra.

Exp. alar., ♂, 41 mm.; ♀, 44 mm.

Hab.: Pemehue, in Araucania; mensis Februarius.

♂ ♀. Wings on the upper-side of a beautiful light violet colour, with the outer half of wings profusely black speckled; fore-wings with a chestnut-coloured dot at end of cell, and a wide stripe of same rich colour from the outer third of inner border to near apex; hind wings with a less pronounced stripe from centre of abdominal border, and fading into the ground colour before reaching the upper border of the wing; fringe on all the wings of the same rich chestnut colour; upper half of abdominal border fringe white; under-side of wings of a lighter hue than above, the fore-wings clouded with ochre, the stripe on the upper-side faintly showing; hind-wings with a black spot at outer end of cell; thorax violaceous, body whitish, under-side dirty white; legs ochraceous; femur violaceous. The ♂ is rather lighter in colour than the ♀.

SIONA TRIANGULARIA, sp. nov.

Alis supra omnibus fumosis, argenteo-splendentibus; subtus, anticis fuscis, lineaque apicali lactea; posticis fuscis, lineaque in similitudinem trianguli albida lactea.

Exp. alar., 39 mm.

Hab.: Punta Arenas, in Freto Magellanico; mensis Junius.

Wings on the upper-side of a shining smoky-silvery hue, with the markings of under-side showing through; under-side, fore-wings of a darker colour than above; costal border and apex ferruginous, with a short milky-white dash at apex; hind-wings of a beautiful chocolate-colour, crossed by two diverging milky-white stripes, running from the base of wing to outer border, the one running parallel to the abdominal border, the other (which is slightly arched) on the upper third of wing; from the abdominal border just above the inner angle of wing another stripe runs towards the outer angle of wing, crossing the abdominal stripe, and on reaching the upper curved one, turns off abruptly at an obtuse angle and terminates at the outer third on the upper border of the wing, so that these stripes form a large triangle with prolonged sides; on the outer border of the wing and midway between these prolongations is a white dash, this dash and the upper edge of curved stripe are black bordered; on either side of curved stripe above the cell are two little dashes; thorax colour of upper-side; abdomen smoky-brown.

This species is easy of recognition; a large milky-white triangle on a chocolate-coloured ground.

This species differs from Butler's *S. columba*, Trans. Ent. Soc., page 422, 1882, in its having the abdominal stripe from base to margin in lieu of the two oblique dashes, and the marginal line instead of the spot on the second median interspace, as also in its larger size.

OPORABIA? ARENOSA, sp. nov.

♂. *Alis anticis supra cineraceis; lineis transversalibus denticulatis numerosis fuscis; posticis supra omnino cineraceis; subtus omnino cineraceis.*

♀. *Alis supra albidis; lineis transversalibus denticulatis numerosis fuscis; subtus subalbidis.* *Exp. alar., ♂ ♀, 34 mm.*

Hab.: Coquimbo; mensis November ad Februarium.

♂. Fore-wings of an ashy colour, with a wide irregular shaped sepia-coloured band across the centre of the wing, and wider on the costal border; this band is again crossed from costa to inner margin by numerous lunulated lines of a darker hue, and bounded on their outer edge by whitish stripes of irregular shape; on the outer side is an irregular zig-zag line of a dark brown, between this line and the outer border a white zig-zag line runs from the angle to the costal border very near apex, between these two lines on the second and third interspaces are two short black dashes; basal fourth of wing same colour as band; hind-wings of a dirty white or ash colour without markings; under-side of all the wings of a smoky colour, with the broad band of fore-wings showing through; fore-legs smoky, banded with white; fringe smoky.

♀. Of a snow-white colour on all the wings; pattern of male, but the band on fore-wings of almost the ground colour; a few curved lines on the outer border of hind-wings from outer to anal angle; under-side of all the wings whitish; fringe whitish, separated from the wing proper by a fine brown undulated line.

DIGONIS PHILIPPII, *sp. nov.*

♂ ♀. *Alis utrinque sulphureis; lineis transversalibus flexuosis fumosis; macula discoidali nigra fumosa.* *Exp. alar., ♂, 29 mm.; ♀, 36 mm.*

Hab.: Araucania; mensis Februarius.

♂ ♀. Wings on both sides of a sulphur-yellow; fore-wings, above, costa mottled and striated with brown; two sinuous and dusky lines across the centre of the wing, one at the basal and the other at the outer third of wing; the inner one forming an open Σ shape; these two lines are wider apart on the costal than at the inner border of wing; at the upper or apical end of cell (between these two lines) is a well-defined black Z-shaped marking; hind-wings with two ill-defined lines across the wing; a black discal spot; outer borders of all the wings chocolate-coloured; under-side of wings as above, the Z-shaped discal spot of upper-side forming only a small dash; thorax and abdomen pale yellow.

I have named this species in honour of Dr. Philippi, who has been kind enough to help me on several occasions with regard to our Chilian *Lepidoptera*.

EPIMECIS? MEDINÆ, *sp. nov.*

♂ ♀. *Alis anticis supra fumosis, lineis duabus nigris cum angulo acuto transverso centrali, inter lineam et apicem fuscis; linea curva albida subapicali; infra nigra, in tertio basali maculaque transversa oblonga luteis; linea curva subapicali albida; posticis, supra duabus partibus basalibus rutilis; linea nigra ad marginem abdominalem; tertio externo nigris; infra, duabus partibus basalibus flavis; tertia externa nigra, medio fascia dentata flavida arcuata divisa; thorax et abdomen fumosa; corpus infra rufus; femina maris pallidior.* *Exp. alar., ♂, 56 ad 60 mm.; ♀, 68 mm.*

Hab. : Valdivia. In coll. Medinae.

♂ ♀. Fore-wings on the upper-side of a smoky colour, thickly marked with fine black dashes; two black and very acute angled lines across the centre of the wing, and which enclose a dark brown band, apical part of wing same colour; near the apex is a lunulated white dash running from the costal border inwards about 4 mm., and from the lower extremity of this dash to the outer angle the wing is clouded with blackish patches, and also on inner border, between the base and inner angulated line; under-side black, with the inner border smoky-piceous; basal third of wing, and a large oblong patch on outer third yellowish, inclining to red; white apical lunulated dash of upper surface; hind-wings, on the upper-side, the basal two-thirds of a fiery-red colour, with a curved black stripe running from the abdominal border (just above anal angle) to near the centre of wing, and a black T-shaped marking on the centre of upper border, outer third of wing black, wider on the upper than on the abdominal border; the under-side is of the same pattern as above, but the colouring is brighter, and at the base inclines more to yellow; the black outer border is bisected by a curved dentate yellowish band from upper to abdominal border; thorax and abdomen smoky, with a few white hairs on thorax; body below drab coloured. The female is paler and duller in colour than the male, and the abdominal border of hind-wings smoky on both sides.

This fine insect is in the collection of Don José Toribio Medina, who obtained it in Valdivia, Southern Chili.

At first sight it looks very much like *Catocala electa*, of Europe.

SCOTOPTERYX? GRAPHICA, *sp. nov.*

Alis supra cervinis; anticis cum linea tortuosa in tertio basilari, e alia in tertio externo nigris; venæ albidæ, margine anteriore venisque sub-viridi et nigro maculosis; maculaque basilari et macula discoidali nigris; posticis supra, cum linea tortuosa in tertio externo nigra; venæ albidæ, margine abdominali viridi maculoso; infra, alæ fumosæ; posticæ in dimidio abdominali subalbida, lineaque anguloso in tertio externo et macula discoidali nigris; caput viride; thorax niveus, cum maculaque nigra in prothorace et metathorace; abdomen fumosum.

Exp. alar., 61 mm.

Hab. : Candelaria, in prov. Curicó. In coll. Medinae.

Wings above of a fawn or stag colour, fore-wings with two black sinuous lines, one across the basal and the other at the outer third, from costal to inner border; a black discal oblongish spot; veins white; on basal third is a large clouded patch composed of black and brown atoms, a brown stripe across the centre of wing just inside outer sinuous black line; at outer angle a large snow-white patch, from whose upper border a lunulated white line runs midway (to costal border) between black sinuous line and outer border of wing; all the wing, especially base and costa, studded with sap-green atoms and thickly speckled with black dots, more conspicuous on central third of wing, which is of a lighter colour than the rest; there are also (irregularly placed) a few clouded white patches; hind-wings with a black sinuous line from abdominal to upper border, and meeting outer line of fore-wings, as also the brown stripe, but this is not so pronounced as in fore-wings, a large black

and white patch at anal angle; veins white; wing studded with green and black spots, being most conspicuous on abdominal border; wings below smoky; fore-wings with pinky reflections; abdominal half of hind-wings creamy-white; an angulated black line from abdominal to upper border; a dark discal spot, and all the wing dark speckled; fore-wings, costa creamy, black speckled, a faint indication of an angulated line, corresponding to that of outer third on upper-side; head green; thorax snow-white on sides, fawn above, intermixed with a few green scales; a dark brown or blackish stripe across pro- and metathorax; abdomen smoky, inclining to fawn, speckled with darker scales; and on the first three segments of abdomen are a bunch of raised green tufts; body and abdomen below dirty brown or drab; legs cream-coloured, black speckled.

I have placed this in *Scotopteryx*, but really I am not sure whether it will remain there.

HYPONOMEUTA RUTILA, *sp. nov.*

Alis anticis supra rutilis; posticis albido-splendentibus; infra, anticis roseo-luteis; posticis albidis. *Exp. alar., 15 mm.*

Hab.: Araucania; mensis Januarius.

Fore-wings on the upper-side of a fiery-red; from the base to near outer angle a darkish stripe runs parallel to inner border; under-side of a rosy-yellow, without markings; hind-wings, above, shining white; below, white; thorax red; abdomen dark brown.

ANTITHESIA MONTANA, *sp. nov.*

Alis anticis in dimidio basali luteis, in postico fuscis, macula orbiculari lutea versus angulum notata; posticis nigris fumosis; subtus fumosa.

Exp. alar., 15 mm.

Hab.: Lolco, in Araucania; mensis Februarius.

Fore-wings above with a large yellow patch occupying the basal half of wing; outer half of wing and a part of base of a very dark red (in some lights), but generally blackish; in centre of outer half is a large round yellow dot, enclosed in a black ring; hind-wings of a shining smoky-black; under-side of all the wings smoky, inclining to black; head yellow; thorax and abdomen colour of hind-wings; fringe on fore-wings blackish; of hind-wings picuous.

AGRIOCOMA MIMULINA, Butler.

var. araucana.

Alis anticis supra sulphureis; macula fumosa magna; posticis albido-splendentibus; subtus, anticis albido-sulphureis, macula eadem ut supra conspicua; posticis albidis, macula discoidali nigra. *Exp. alar., 19 mm.*

Hab.: Araucania; mensis Februarius.

Of this species, Butler's description of *mimulina* comes pretty near, excepting that the patch is smoky-coloured, instead of reddish, also he does not mention the black discal spot and a series of black dashes on outer border of hind-wings on the under-side; so that should *var. araucana* be elevated to the rank of a new species

instead of a variety, as I now place it, it will be distinguishable from *mimulina* by the following:—Triangular patch on upper-side of fore-wings *smoky* instead of *reddish*, and enclosing on its lower edge a bright *silvered dot* in place of *white one* of *mimulina*; under-side of fore-wings *sulphury-white* instead of *snow-white*; under-side of hind-wings with a *black discal spot*, and a series of *black dashes* between the nervules on the outer border at base of fringe; the rest as in *mimulina*.

Santiago, Chili: 1890.

LIFE-HISTORY OF *PLUTELLA ANNULATELLA*, CURT.

BY NELSON M. RICHARDSON, B.A., F.E.S.

Since I have collected at Portland, I have been more or less on the look-out for the larva of *P. annulatella*, but have never come across it until this year, though I have before seen traces of its presence.

I first made acquaintance with this species by shaking an imago out of an overhanging tuft of grass on September 27th, 1887, and this is the only clue that I have to its mode of hibernating, as my other captures have all been made in June and July, in which months I have taken a few each year, but not more than about 20 altogether.

The plant on which it feeds (*Cochlearia officinalis*) is common in many parts of Portland, but the larva seems to be rather local, as in some places it did not appear to be present, though there was plenty of the food-plant; where it occurred at all, it was not uncommon, though until one knew something of its habits, one might easily pass it by unnoticed.

The egg is apparently laid in the flower-bud, as the young larva, which could not in some cases have been hatched more than a day or two before I found it, draws together the petals slightly with silk, and lives inside them, ejecting its frass through the small gaps in its habitation between the petals. It was in this state when I first discovered it in the middle of May, all the larvæ at that time being rather small. As the larva grows, it gets too big for its first little house, not to mention the fact that it has eaten its contents, and for the rest of its larval life it spins a few threads of silk amongst the bunch of flowers and seed pods in a flower-head, and eats flowers, seeds, pods, leaves, and stalks, preferring them in the order in which I have named them. The extent to which a large larva can conceal itself in a flower-head, which seems quite open to observation throughout, is most extraordinary. I have sometimes thought that one might be present from seeing a little eating or a thread or two of silk but could not see the larva itself until I pinched the seed-head, when it immediately